

DIN IEC 751
Temperature/Resistance Table for Platinum Sensors



°C	Ω	°C	Ω	°C	Ω	°C	Ω
-200	18.52	20	107.79	240	190.47	460	267.56
-195	20.68	25	109.73	245	192.29	465	269.25
-190	22.83	30	111.67	250	194.10	470	270.93
-185	24.97	35	113.61	255	195.91	475	272.61
-180	27.10	40	115.54	260	197.71	480	274.29
-175	29.22	45	117.47	265	199.51	485	275.97
-170	31.33	50	119.40	270	201.31	490	277.64
-165	33.44	55	121.32	275	203.11	495	279.31
-160	35.54	60	123.24	280	204.90	500	280.98
-155	37.64	65	125.16	285	206.70	505	282.64
-150	39.72	70	127.08	290	208.48	510	284.30
-145	41.80	75	128.99	295	210.27	515	285.96
-140	43.88	80	130.90	300	212.05	520	287.62
-135	45.94	85	132.80	305	213.83	525	289.27
-130	48.00	90	134.71	310	215.61	530	290.92
-125	50.06	95	136.61	315	217.38	535	292.56
-120	52.11	100	138.51	320	219.15	540	294.21
-115	54.15	105	140.40	325	220.92	545	295.85
-110	56.19	110	142.29	330	222.69	550	297.49
-105	58.23	115	144.18	335	224.45	555	299.12
-100	60.26	120	146.07	340	226.21	560	300.75
-95	62.28	125	147.95	345	227.96	565	302.38
-90	64.30	130	149.83	350	229.72	570	304.01
-85	66.31	135	151.71	355	231.47	575	305.63
-80	68.33	140	153.58	360	233.21	580	307.25
-75	70.33	145	155.46	365	234.96	585	308.87
-70	72.33	150	157.33	370	236.70	590	310.49
-65	74.33	155	159.19	375	238.44	595	312.10
-60	76.33	160	161.05	380	240.18	600	313.71
-55	78.32	165	162.91	385	241.91	605	315.31
-50	80.31	170	164.77	390	243.64	610	316.92
-45	82.29	175	166.63	395	245.37	615	318.52
-40	84.27	180	168.48	400	247.09	620	320.12
-35	86.25	185	170.33	405	248.81	625	321.71
-30	88.22	190	172.17	410	250.53	630	323.30
-25	90.19	195	174.02	415	252.25	635	324.89
-20	92.16	200	175.86	420	253.96	640	326.48
-15	94.12	205	177.69	425	255.67	645	328.06
-10	96.09	210	179.53	430	257.38	650	329.64
-5	98.04	215	181.36	435	259.08	655	331.22
0	100.00	220	183.19	440	260.78	660	332.79
5	101.95	225	185.01	445	262.48		
10	103.90	230	186.84	450	264.18		
15	105.85	235	188.66	455	265.87		

Permissible Deviations for Class A and Class B Platinum Sensors

The permissible deviations for platinum resistance elements (uncalibrated) are determined by the following equations (in accordance with DIN IEC 751):

Permissible Deviation – Class A
 ${}^{\circ}\text{C} = \pm(0.15 + 0.002 [t])$

Permissible Deviation – Class B
 ${}^{\circ}\text{C} = \pm(0.3 + 0.005 [t])$

Where [t] is the temperature value in ${}^{\circ}\text{C}$.

Measuring Temp. ${}^{\circ}\text{C}$	Permissible Deviations			
	Class A		Class B	
	Ω	${}^{\circ}\text{C}$	Ω	${}^{\circ}\text{C}$
-200	± 0.24	± 0.55	± 0.56	± 1.3
-100	± 0.14	± 0.35	± 0.32	± 0.8
0	± 0.06	± 0.15	± 0.12	± 0.3
100	± 0.13	± 0.35	± 0.30	± 0.8
200	± 0.20	± 0.55	± 0.48	± 1.3
300	± 0.27	± 0.75	± 0.64	± 1.8
400	± 0.33	± 0.95	± 0.79	± 2.3
500	± 0.38	± 1.15	± 0.93	± 2.8
600	± 0.43	± 1.35	± 1.06	± 3.3
650	± 0.46	± 1.45	± 1.13	± 3.6
700	—	—	± 1.17	± 3.8
800	—	—	± 1.28	± 4.3
850	—	—	± 1.34	± 4.6

